K22U 1791

Reg. No. : .....

Name : .....

**III Semester B.Sc. Degree (C.B.C.S.S. – Regular)**
**Examination, November 2021**
**(2020 Admission)**
**GENERAL AWARENESS COURSE IN LIFE SCIENCES (ZOOLOGY) AND COMPUTATIONAL BIOLOGY**
**3A12ZCB : Algorithms and Statistical Methods in Bioinformatics**

Time : 3 Hours Max. Marks : 40

PART – A

Answer **all** the questions. **Each** question carries **1** mark.

1. Expand PERL.
2. Who developed PERL ?
3. What is a variable in Python ?
4. Expand NCBI.
5. Define Mean.
6. List the types of ANOVA. **(6×1=6)**

PART – B

Answer **any 6** questions. **Each** question carries **2** marks.

7. What are the objects of BioPerl ?
8. List the data types of Python.
9. What are the major modules of C++ ?
10. What is MatLab ?
11. Write a note on a R Language.
12. What is coefficient of variation ?
13. What is F-distribution ? **(6×2=12)**

P.T.O.

## PART – C

Answer **any 4** questions. **Each** question carries **3** marks.

14. Discuss the features of BioPerl.
15. What is the role of Biopython in Computational Biology ?
16. What are the major types of central tendency ? Discuss.
17. What are the major types of dispersion in Computational Biology ?
18. Discuss the relevance of t-test in Computational Biology.
19. Compare correlation and regression.
20. Discuss the working environment of MatLab. **(4×3=12)**

## PART – D

Answer **any 2** questions. **Each** question carries **5** marks.

21. Outline the major algorithms in Computational Biology.
22. What are the major methods of representation of data ?
23. Discuss the following with example :
    i) Standard deviation.
    ii) Quartile deviation.
24. Outline the relevance of ANOVA in various exercise in Computational Biology. **(2×5=10)**

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